

LAGENARIA VULGARIS Ser. Peat Meadow, Worcester, Sept. 20, 1936, *Mrs. Mary C. Dodge*. Noted again in 1937. No herbarium sheet.

LOBELIA CARDINALIS L., forma ALBA (A. Eaton) St. John. W., West Upton, 1890, *Kitty Ida Fish*. Also C., no. 4188, Uxbridge, Sept. 1, 1935, *Dr. M. R. Sharpe*. RHODORA, 21: 217.

LOBELIA CARDINALIS L., forma ROSEA St. John. Brook-bed, Worcester, July 16, 1917, *Mrs. Frank E. Lowe*. RHODORA, 21: 217.

ASTER NOVAE-ANGLIAE L., forma GENESEENSIS House. W., Peat Meadow, Worcester, Sept. 18, 1935, *Norman P. Woodward*.

ASTER VIMINEUS Lam., var. FOLIOLOSUS (Ait.) Gray. W., Peat Meadow, Worcester, Aug. 31, 1936, *Norman P. Woodward*. Rays lilac-tinged.

ASTER PUNICEUS L., var. FIRMUS (Nees) T. & G. W., Worcester, Sept. 14, 1936, *Norman P. Woodward*.

HELIANTHUS ANNUUS L., var. BICOLOR Cockerell. W., Peat Meadow, Worcester, Aug. 31, 1936, *Norman P. Woodward*. Rays red-brown. Two widely separated stations.

ERECHTITES HIERACIFOLIA (L.) Raf., var. INTERMEDIA Fernald. W., Worcester, Aug. 18, 1934, *Norman P. Woodward*. RHODORA, 19: 27.

ERECHTITES HIERACIFOLIA (L.) Raf., var. PREALTA (Raf.) Fernald. W., Worcester, Aug. 18, 1934, *Norman P. Woodward*. RHODORA, 19: 27.

ARCTIUM MINUS (Hill) Bernh., forma LEUCOCEPHALUM House. W., Worcester, Aug. 8, 1919, *Norman P. Woodward*. Bull. N. Y. State Mus. 243-244: 41, 1923.

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NEW PLANTS FROM KENTUCKY

E. LUCY BRAUN

ARABIS **perstellata**, sp. nov. Planta perennis, e basi ramosa; ramis in anthesi 1-5 dm. post anthesim 3-3.5 dm. longis dense stellato-pubescentibus per omnes partes griseis; foliis radicalibus parvis lamina 1-2.5 cm. longa lyrato-pinnatifida petiolo tenui; foliis caulinis valde repando-dentatis vel infimis lyrato-pinnatifidis 1-3 cm. longis 5-8 mm. latis sessilibus basi auriculatis; pedicellis in anthesi 2.5-4 mm. longis deinde elongatis post anthesim ad 8-9 mm. in longitudine; petalis roseis 3-4 mm. longis; siliquis 2 cm. longis.—Wooded hillsides, Elkhorn Creek, Franklin County, Kentucky, May 6, 1936, *Braun*, Ky. no. 1226 (TYPE in Gray Herbarium); April 20, 1939, *Braun*, Ky. no. 2215, and May 11, 1939, *Braun*, Ky. no. 2413 (TOPOTYPES distributed to a number of herbaria).

Plant somewhat similar in aspect to *A. dentata*, but perennial and of smaller size, decidedly gray due to the dense fine stellate pubescence, both surfaces of basal and cauline leaves stellate-pubescent, somewhat more densely and finely so beneath; cauline and basal leaves smaller. Flowers larger than in *A. dentata*, pink instead of yellowish, and on pedicels about twice as long. Siliques divaricately spreading as in *A. dentata*, but on slender pedicels nearly half the length of the silique. Lacks the coarse aspect of *A. dentata*.

Some variation in height of plants and in leaf-size occurs; stems occasionally 3 dm. high at flowering, and 4 dm. in fruit; leaves on some plants collected in a rainy spring larger than those of type, basal with blades up to 4 cm. in length and pinnatifid only at base, cauline reaching 4 cm. in length, and 1.5 cm. in width including the salient teeth. Foliage of largest-leaved plants less gray but exhibiting same type of pubescence as smaller-leaved plants. Petals 3-4 mm. long, 1.2 mm. wide at apex, erose, claws white, blades varying from light rose-pink to darker with deep purplish-pink veins. Sepals 2.5 mm. long, spreading at right angles to pedicel and petals, forming a cross; long strigillose hairs interspersed with the appressed stellate hairs. Flowering pedicels from 2.5 mm. long to 7 mm. long on older flowers, divaricately spreading, or slightly reflexed; raceme at first compact, becoming elongate, not branched. Fruiting pedicels divaricate, siliques straight or slightly curved, slightly inclined upward. Silique faintly nerved for about one-third its length; seeds in one row, not winged; some of the trichomes on silique simple or merely bifurcate, others stellate.

At flowering time, basal leaves from previous season are present. Later, these wither, and a new short leafy shoot develops between the elongate fruiting stems. Late in the summer this appears as a rosette elevated on a stem about an inch long on which a few dry leaves are visible. Additional rosettes may develop from basal buds. The late summer leaves are very densely appressed-stellate-pubescent on both surfaces. On some plants, scars of several series of rosette-leaves are seen on what at first might be mistaken for tap-root, as the rosette axis continues the tap-root axis. Such old and leafless stems may become decumbent and covered by humus and forest litter. Plants of steep wooded hillsides, sometimes on shaded mossy and humus-covered limestone rocks.

Two immature specimens of this species were found in the Gray Herbarium, at one side of a sheet of large-leaved *A. dentata* from

“sandy borders of Ohio River, Kentucky.” A pencil line was drawn around these two pieces and, in Dr. Robinson’s handwriting, is the annotation “something else.” Just below these two pieces, in Asa Gray’s writing, is the locality, “N. Kentucky.”

ARABIS PERSTELLATA \times ARABIS LAEVIGATA (Muhl.) Poir. One plant of an Arabis which appears to be a hybrid between *A. perstellata* and *A. laevigata* was found in the type locality of *A. perstellata*. This plant branches at the base like *A. perstellata*, but one stem is longer and stouter than the others, with branches from some of the leaf-axils and inflorescence. The leaves are elongate and similar in shape to those of *A. laevigata*. Any one stem of this apparent hybrid might be mistaken for *A. laevigata* but for the pubescence. Basal leaves stellate-pubescent on both surfaces, but not densely so. Stem and cauline leaves pubescent with scattered simple, bifurcate and stellate hairs. Pedicels and calyx with long simple hairs. Petals white to pinkish, about one-fourth to one-third longer than the *ascending* sepals. Hybrid specimen (*Braun*, Ky. no. 2216) and specimen of *A. laevigata* from same locality (*Braun*, Ky. no. 2217), deposited in Gray Herbarium.

DRABA RAMOSISSIMA Desv., var. **glabrifolia**, var. nov. Foliis rosularum hiemalium et caulium floriferarum supra fere glabris subtus sparsissime stellato-pubescentibus nitentibus.—Limestone cliffs, Brooklyn Bridge, Kentucky River, Jessamine County, Kentucky, April 17, 1937, *Braun*, Ky. no. 1332 (TYPE in Gray Herbarium, ISOTYPE in author’s herbarium).

Draba ramosissima Desv. is a highly variable species, material in the Gray Herbarium consisting of two somewhat unlike groups of plants: one with cauline leaves scarcely reduced in size, or even larger than the basal leaves, and strongly branched inflorescence; the other with the basal rosette prominent, the stem-leaves similar but gradually reduced upward. Leaves vary greatly, from ones merely repand-dentate to those laciniate-toothed or almost pinnatifid. Pubescence varies, some plants so densely stellate-pubescent all over as to appear gray; others, though green, are stellate-pubescent on all surfaces. The above variety belongs to that group with pronounced basal rosette, which, in the Brooklyn Bridge plants, is evergreen. Specimens of C. W. Short’s, from “cliffs of Ky. river,” are similar in growth-habit to the plant described above, but are much more pubescent.

CASSIA HEBECARPA Fernald, var. **longipila**, var. nov., caule sparse villosa per omnes partes; petiolis prope glandulas dense longeque villosis, saepius cum pilis lineam inter glandulam et petioli basin

formantibus; calyce valde villosa cum pilis longis albis.—Dry slopes, Knott County, Kentucky, July 23, 1937, *Braun*, Ky. no. 1633 (TYPE in Gray Herbarium).

The conspicuous long hairs on the petiole near the gland and the long white hairs on the sepals distinguish this variety.

POLEMONIUM REPTANS L., var. **villosum**, var. nov. Planta pubescens per omnes partes cum pilis mollibus aliis glanduliferis aliis eglanduliferis.—Kentucky and Ohio. Woods, Beaver Pond, Adams County, Ohio, April 18, 1930; near Carter P. O., Lewis County, Kentucky, April 14, 1936, *Braun*, Ky. no. 1154; Beaver Pond, Adams County, Ohio, March 25, 1939; Hazel Branch, Lewis County, Kentucky, April 2, 1939, *Braun*, Ky. no. 2178 (TYPE in Gray Herbarium, ISOTYPE in author's herbarium); Ohio Brush Creek, Adams County, Ohio, April 9, 1939; Cave Creek, Pulaski County, Kentucky, April 25, 1939, *Braun*, Ky. no. 2296.

These densely villous plants with stems long-villous, and with inflorescences and the rachises of young leaves so pubescent that they are whitish, present a striking contrast to the nearly glabrous species with shining stems. The variety is so viscid that it adheres to the paper on which it is dried. The long hairs are more widely spaced on leaves and calyx; hairs on the stems sometimes 1–1.5 mm. long. Plant generally of shorter stature than the species, with smaller flowers, and leaflets tending to be broad-elliptic. Pubescence on the radical leaves persists throughout the season. Gradations between the species and variety occur, some plants showing the long hairs on stems, petioles and rachises, but with the inflorescence finely short-puberulent. Occasional plants with shining stems have scattered long hairs; these seem best referred to the species.

Polemonium reptans var. *villosum* is abundant at the western front of the Allegheny Plateau in Adams County, Ohio, and in Lewis and Fleming Counties, Kentucky, where it seems almost to replace the glabrous species.

EUPATORIUM deltoides, sp. nov. Caulibus 4–6 dm. altis, glabris; foliis oppositis, valde tenuibus, late deltoideis, latitudine et longitudine aequalibus, maioribus 10 cm. in utramque partem, inaequaliter grosseque dentatis, glabris pilis minutis paucis subtus in costis et in foliorum marginibus exceptis; petiolis laminas longitudine aut omnino aut fere adaequantibus, glabris, vel eis foliorum diminutorum inflorescentiae puberulentibus; foliorum jugo infimo remoto, laminis parvis, 2 cm. longis saepe marcescentibus in anthesi; inferiore nervorum jugo prominente, folii marginem e basi per 5–15 mm. formante, folii basi petiolo proxima late cuneata sed lamina supra partem cuneatam in

formam subcordatam dilatata; apice acuto vel acuminato; corymbo plano, parvo et patente; pedicellis puberulentibus; capitulis ca. 15-flosculis, floribus albis, corollae dentibus apice extus minute pubescentibus; involucro 4 mm. alto, squamis lanceolatis, uniseriatim positis, aequalibus, 1 vel 2 exterioribus ceteris aliquanto brevioribus nonnullisque interioribus tenuissimis et paene hyalinis ceteris longioribus exceptis, usque ad medium binis striis praeditis, parte autem superiore fimbriatis praecipue interioribus, squamarum exteriorum apicibus fusco-viridibus et cuspidatis; achaeniis in anthesi 2–2.5 mm. longis.—KENTUCKY: in moist sandstone rockhouses* of the basal Pottsville formation, usually in company with *Thalictrum clavatum*, *Heuchera parviflora* var. *Rugellii* and *Cystopteris bulbifera*, but much more local in occurrence; near Cumberland Falls, Whitley County, in young flower, September 6, 1939, *Braun*, Ky. no. 2583 (TYPE in Gray Herbarium, ISOTYPES deposited in several herbaria); in bud, Dog Slaughter Creek, Whitley County, September 6, 1939, *Braun*, Ky. no. 2593; vegetative shoots and dry flower-stalks of previous season, near Cumberland Falls, Whitley County, June 25, 1936, *Braun*, Ky. no. 1271, and Tight Hollow, Wolfe County, April 26, 1931, *Braun*, Ky. no. 220.

Eupatorium deltoides belongs to the *Urticaefolia* group; it is very striking because of its exceedingly thin, broad, long-petioled leaves which have the lower pair of lateral veins prominent, forming the leaf-margin for 5 to 15 mm. from base, the immediate leaf-base broadly cuneate, but blades flaring above vein-margin produce a subcordate base. The leaves are mostly concentrated on the upper half of the stem and always arranged in life in a perfect mosaic inclined slightly to the one-sided light of the peculiar habitat. Though fairly large, the whole plant is so delicate that it probably could not withstand the impact of heavy rain. It is because of the protected situations in which the plant always grows that it is possible to collect dried inflorescences with complete involucre months after flowering.

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* The term "rockhouse" is used to designate a peculiar type of overhang, somewhat resembling the mouth of a cave, which occurs frequently in cliffs of the Pottsville conglomerate. The floor of such rockhouses is sandy, dry or moist depending on seepage; the roof arches in more or less hemispheric form, and cuts off all rain except what may blow in from the side, and all overhead light.